NEWS RELEASE

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Don't let nature get attached to you

Ticks cause many diseases

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The potential for outdoor activity in Europe is enormous when you consider the bike trails, volksmarches, and weekend camping trips, but one teeny-weeny, blood-sucking parasite known as the tick can spoil it all. While these activities are a wonderful way to get attached to nature, don't let nature get attached to you.

Ticks can carry several potentially deadly diseases for you and your pets. Two common diseases are Lyme disease, caused by the bacteria group *Borrelia*, and tick-borne encephalitis, caused by the virus *tick-borne encephalitis virus*. The bite of an infected *Ixodes* tick transmits both diseases. Neither disease is spread person-to-person.

Lyme Disease

A person with Lyme disease may develop fever, headache, fatigue, and a very characteristic skin rash called erythema migrans. This rash is sometimes referred to as a "bulls-eye" rash because it is red and circular in appearance. As it continues to grow (up to nearly 12 inches) it will often loose the red appearance in the center of the rash.

If the disease is left untreated, it can worsen and cause swelling of the brain, facial paralysis, and pain and numbness in the hands and feet. It also can cause enlargement and inflammation of the heart, intermittent bouts of arthritis in large joints (commonly the knees) and problems with sleeping, concentration, and even short term memory.

In most cases, Lyme disease can be treated with antibiotics. In a small percentage of patients, problems with joint and muscle pain, fatigue, and memory defects can persist for months to years after treatment.

Tick-borne Encephalitis

Tick-borne encephalitis (TBE) is a disease seen in Europe and other parts of the world. This disease, like Lyme disease, is spread by the bite of infected *Ixodes* ticks. Unlike Lyme disease, a person can also get this disease by drinking raw milk from sheep, goats, and cows infected with the virus.

A person with TBE can go one to two weeks without any symptoms of the infection. After that, the disease has two phases. The first phase is two – four days of fever, headache, loss of appetite, muscle aches, nausea and/or vomiting. After this, the virus goes into eight days of remission. About 20 – 30 percent of infected people enter the second phase of the disease. This affects the nervous system and cause inflammation of the lining of the brain (meningitis), inflammation of the brain itself (encephalitis), or a combination of the two (meningoencephalitis).

Because TBE is caused by a virus and not a bacterium, antibiotics are not effective in treating it. In severe cases, hospitalization is essential. Depending on the severity of the illness, those affected may require anti-inflammatory drugs and assisted breathing procedures. In about 1 to 2 percent of the cases, death will result after about five to seven days. There is a non-FDA approved vaccine available in Europe. People interested in this vaccine should contact their health care provider for more information.

The prevention of both of these diseases is the same: Avoid tick bites. Ticks have a way of sensing heat and carbon dioxide from long distances. They will climb to the tops of long stalks of grass or other vegetation and wait for animals or humans to brush up against them. Ticks then attach to their "host" and begin feeding. Male and female ticks require this blood meal to reproduce. Female ticks lay from several hundred to several thousand eggs, depending on the type of tick.

Prevention

Prevent tick bites by avoiding areas of overgrown brush, un-mowed yards, and fields that back up into wooded areas with wild animals. These are popular places for ticks. Before going hiking, camping, or playing in high brush areas, be sure to use some simple precautions that can significantly reduce the chances of your being a tick's breakfast.

To prevent being tic-breakfast, the "DoD Arthropod Repellant System" is a Soldier's best friend. This system includes wearing permethrin treated uniforms, applying DEET to exposed areas of the skin, and properly wearing the uniform (sleeves rolled down and pants tucked into boot tops).

It should be noted that the new ACUs do not come pre-treated with permethrin. There are several methods to treat military uniforms, but the recommended method is the Individual Dynamic Absorbent kit (NSN 6840-01-345-0237).

Additional ways to prevent tick bites:

- Wearing light colored clothing makes it easier to see ticks attached to the skin and makes their removal easier.
- Wearing long pants and tucking them into socks or hiking boots makes it harder for ticks to find exposed skin to bite.
- Aerosol cans of permethrin are available in many German pharmacies (Apoteke) to treat civilian clothing.
- Many outdoor clothing suppliers provide permethrin treated garments through mail or on-line ordering.
- Apply DEET to exposed areas of the skin as directed by the label, but do not apply to children under two months old. Also, avoid milk that has not been pasteurized.

If you do find a tick on your body, remove it promptly but carefully. To properly remove a tick, use a fine tip tweezers to grasp the tick as close to the skin as possible and pull up in a smooth, steady motion. After removal, clean the area with soap and water and apply an antiseptic. Avoid jerking motions or pinching off the head, as this could cause secondary infections.

Do not use home remedies, such as hot matches, fire, fingernails, polish, or other extreme methods to remove ticks. Aside from being generally ineffective, these techniques often cause the attached tick to regurgitate into the host. Wearing flea collars on a person's body, directly or over clothes, is not only ineffective, but can be very dangerous. The pesticides in flea collars can concentrate in the skin and cause skin and internal organ damage.

Pets

Ticks also spread bacterial infections to pets. Some of these infections are Lyme disease, Ehrlichia, and Rickettsial infections. Pets are not at risk for Tick-Borne Encephalitis.

The best way to prevent these diseases is by preventing ticks on your pet. Several products are available: topical flea and tick medication such as Frontline and prescription tick collars. Frontline is a tick repellant and insecticide. It is safe for adult dogs and cats, as well as puppies and kittens. It is also waterproof for those pets who like to swim. The collars are for dogs only and should last for about 3 months at a time. They are best used in addition to the Frontline. Do not use OFF or DEET on pets!!

Don't panic if you see a tick on your pet. You may still see ticks on your pet even with Frontline, but most likely they are either dead or dying. Ticks often have to be attached more than 24 - 48 hours to spread infection. Remember, not all ticks are infectious!

Tick removal for pets is the same as for humans. If your pet is too excitable or if you need an extra hand, please call your local veterinary clinic for assistance. Always wash your hands after removing ticks from either yourself or your pet.

To find out more information about ticks and tick-borne diseases, contact the author at 475-8586. You can also contact your local health care provider or go online and visit the Centers for Health Promotion and Preventive Medicine (http://chppm-www.apgea.army.mil/), the Centers for Disease Control and Prevention (http://www.cdc.gov/), and the Armed Forces Pest Management Board (http://www.afpmb.org/).

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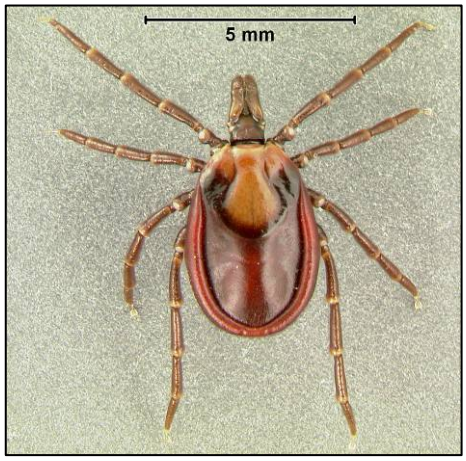

Ixodes tick

Photo by Dr. Gary D. Alpert, Harvard University